

Notice of Allowability

Application No.

09/914,098

Applicant(s)

CAHOON ET AL.

Examiner

Nashaat T. Nashed, Ph. D.

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to to the amendment filed 6/29/04.
2. ☒ The allowed claim(s) is/are 63,67-76 and 80-82.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

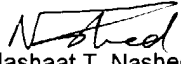
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 1/8/02
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Nashaat T. Nashed, Ph. D.
Primary Examiner
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The application has been amended as requested in the communication filed April 26, 2004. Accordingly, claims 1-62 have been canceled, and new claims 63-82 have been entered.

Applicant's election without traverse of Group 74, corresponding to new claims 63-82, in the reply filed on April 26, 2004 is acknowledged.

Claims 63-82 are pending under consideration.

In view of the papers filed July 30, 2004, the inventorship in this nonprovisional application has been changed by the deletion of William D. Hitz and Edgar B. Cahoon as co-inventor. The remaining inventors for the instant application are Rebecca E. Cahoon, Anthony J. Kenney, and Kevin G. Ripp.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Maria Restrepo-Hartwig on August 4, 2004.

The application has been amended as follows:

- Claim 63. An isolated polynucleotide comprising:
- (a) a nucleotide sequence encoding a polypeptide having lysophosphatidic acid acyltransferase (LPAAT) activity, wherein the polypeptide has an amino acid sequence of at least 95% ~~80%~~ sequence identity, based on the Clustal V method of alignment, when compared to SEQ ID NO:56, or
 - (b) a full complement of the nucleotide sequence of (a).

Cancel claims 64-66 and 77-79.

- Claim 76. An isolated polypeptide having LPAAT activity, wherein the polypeptide has an amino acid sequence of at least 95% ~~80%~~ sequence identity, based on the Clustal V method of alignment, when compared to SEQ ID NO:56.
- Claim 81. A method for isolating a polypeptide having LPAAT activity comprising isolating the polypeptide from a cell or culture medium of a ~~the~~ cell, wherein the cell comprises a recombinant DNA construct comprising the polynucleotide of Claim 63 operably linked

to at least one regulatory sequence, and expresses the polypeptide encoded by said polynucleotide.

- Claim 82. A method of increasing altering the level of expression of an LPAAT in a host cell comprising: (a) transforming a host cell with the recombinant DNA construct of Claim 70; and (b) growing the transformed host cell under conditions that are suitable for expression of the recombinant DNA construct, and thereby increase the level of LPAAT in said host cell relative to that of wild-type. ~~wherein expression of the recombinant DNA construct results in production of altered levels of oil content in the seed, stem, and leaf in the transformed host cell.~~

Claims 63, 67-76, and 80-82 are allowed.

The following is an examiner's statement of reasons for allowance: The application discloses the nucleic acid of SEQ ID NO: 55 encoding Lysophosphatidic acid acyltransferase from soybean. They have enabled the nucleic acid use in transforming a host plant cell in order to increase the oil content in the host cell relative to the wild-type cell. Both the nucleic and amino acid sequences are free of prior art. Thus, the claims are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nashaat T. Nashed, Ph. D. whose telephone number is 571-272-0934. The examiner can normally be reached on MTTF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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